

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strike through~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (previously presented) An object managing apparatus managing an object used by an application program including one or more components, in a component base that is a base for configuring and executing the application program and provides each component with an external storage access function, comprising:

a selecting device selecting an object managing method suitable for a type of a component, from a plurality of object managing methods that are prepared in advance, each object managing method representing an algorithm for managing an object used in the apparatus and including an accessing method to data stored in an external storage; and

a switching device switching in the component base, at least one of an object caching part that caches a persistence object corresponding to data of the external storage using a specified algorithm and an object persistence processing part performing conversion between the data of the external storage and the persistence object, with a part corresponding to the selected object managing method.

2. (original) The object managing apparatus according to claim 1, wherein the switching device automatically generates a program of the part corresponding to the selected object managing method, and incorporates the program in the object managing apparatus.

3. (original) The object managing apparatus according to claim 1, wherein the switching device selects the part corresponding to the selected object managing method from a part group that is prepared in advance, and incorporates the selected part in the object managing apparatus.

4. (original) The object managing apparatus according to claim 1, wherein the selecting device selects the object managing method that is designated by a user.

5. (previously presented) The object managing apparatus according to claim 1, wherein

the selecting device selects the object managing method that is designated by the application program.

6. (original) The object managing apparatus according to claim 1, wherein the selecting device includes an input device inputting usage information in for component, and selects the object managing method based on the usage information.

7. (original) The object managing apparatus according to claim 1, wherein the switching device has a cache table caching an object for each transaction, and uses an object caching part that registers an object in the cache table after a transaction starts, and clears the cache table when the transaction terminates, as the part corresponding to the selected object managing method.

8. (original) The object managing apparatus according to claim 1, wherein the switching apparatus has a cache table common to all transactions, and uses an object caching part which does not clear the cache table but makes the other transaction use an object on the cache table when one transaction terminates, as the part corresponding to the selected object managing method.

9. (original) The object managing apparatus according to claim 1, wherein the switching device uses an object caching part that writes data of an object being used by the application program in the external storage, and sets next data to the object being used, thereby returning the data to the application program when the application program requests acquisition of an object to be processed, as the part corresponding to the selected object managing method.

10. (original) The object managing apparatus according to claim 1, wherein the switching device uses the object caching part that caches all data of the external storage in advance before the application program requests an object to be processed, as the part corresponding to the selected object managing method.

11. (original) The object managing apparatus according to claim 1, wherein

the switching device uses an object caching part that registers an interface related to the persistence object, and reuses the interface together with the persistence object, as the part corresponding to the selected object managing method.

12. (original) The object managing apparatus according to claim 1, further comprising a designating device designating one or more data items suitable for the type of the component, wherein

the switching device uses an object persistence processing part that performs conversion between data of the external storage and the persistence object regarding designated data items of the persistence object, as the part corresponding to the selected object managing method.

13. (previously presented) An object managing apparatus managing an object used by an application program including one or more components, in a component base that is a base for configuring and executing the application program and provides each component with an external storage access function, comprising:

a storing device storing schedule information for selecting an object managing method suitable for a type of a component, from a plurality of object managing methods that are prepared in advance, each object managing method representing an algorithm for managing an object used in the apparatus and including an accessing method to data stored in an external storage; and

a switching device switching in the component base, at least one of an object caching part that caches a persistence object corresponding to data of an external storage using a specified algorithm and an object persistence processing part performing conversion between data of the external storage and the persistence object, with a part corresponding to the suitable object managing method based on the schedule information.

14. (previously presented) A computer readable recording medium storing a program for a computer that manages an object used by an application program including one or more components, in a component base that is a base for configuring and executing the application program and provides each component with an external storage access function, the stored program causes the computer to perform:

selecting an object managing method suitable for a type of a component, from a plurality of object managing methods that are prepared in advance, each object managing method

representing an algorithm for managing an object used in the apparatus and including an accessing method to data stored in an external storage; and

switching in the component base, at least one of an object caching part that caches a persistence object corresponding to data of an external storage using a specified algorithm and an object persistence processing part performing conversion between data of the external storage and the persistence object, with a part corresponding to the selected object managing method.

15. (previously presented) A managing method managing an object used by an application program including one or more components, in a component base that is a base for configuring and executing the application program and provides each component with an external storage access function, comprising:

preparing a plurality of object managing methods in advance, each object managing method representing an algorithm for managing an object used in the apparatus and including an accessing method to data stored in an external storage;

selecting an object managing method suitable for a type of a component, from the plurality of object managing methods;

automatically switching in the component base, at least one of an object caching part that caches a persistence object corresponding to data of an external storage using a specified algorithm and an object persistence processing part performing conversion between data of the external storage and the persistence object, with a part corresponding to the selected object managing method; and

managing an object used by the application program using the part corresponding to the selected object managing method.

16. (previously presented) A propagating signal propagating a program for a computer managing an object used by an application program including one or more components in a component base that is a base for configuring and executing the application program and provides each component with an external storage access function, to the computer, the propagated program causes the computer to perform:

selecting an object managing method suitable for a type of a component, from a plurality of object managing methods, each object managing method representing an algorithm for managing an object used in the apparatus and including an accessing method to data stored in an external storage; and

switching in the component base, at least one of an object caching part that caches a persistence object corresponding to data of an external storage using a specified algorithm and an object persistence processing part performing conversion between data of the external storage and the persistence object, with a part corresponding to the selected object managing method.

17. (previously presented) An object managing apparatus managing an object used by an application program including one or more components, in a component base that is a base for configuring and executing the application program and provides each component with an external storage access function, comprising:

selecting means for selecting an object managing method suitable for a type of a component, from a plurality of object managing methods that are prepared in advance, each object managing method representing an algorithm for managing an object used in the apparatus and including an accessing method to data stored in an external storage; and

switching means for switching in the component base, at least one of an object caching part that caches a persistence object corresponding to data of an external storage using a specified algorithm and an object persistence processing part performing conversion between the data of the external storage and the persistence object, with a part corresponding to the selected object managing method.

18. (new) A processing method for application program units that have corresponding persistent objects, corresponding persistent object caches for persistent object data and corresponding persistent object processes for controlling communication of the persistent object data between the caches and storage where the persistent object caches and persistent object processes can reside in a component base associated with applications, said method comprising:

selecting a first object managing method suitable for a first one of the program units;

automatically switching a persistent object cache and a persistent object process corresponding to the first object managing method into the component base providing a persistent object cache and a persistent object process in the component base corresponding to the first one of the program.